



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,524	11/14/2003	Andrey A. Demidov	NU-207WO-1	2224
38731	7590	07/26/2006	EXAMINER	
NUFERN 7 AIRPORT PARK ROAD EAST GRANBY, CT 06026			KIM, ELLEN E	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,524

Applicant(s)

DEMIDOV ET AL.

Examiner

Ellen Kim

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-121 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 53-74 is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-31, 40, 42-52, 75-84, 91-121 is/are rejected.
- 7) ☒ Claim(s) 17,32-39,41 and 85-90 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This is responsive to Applicant's amendment filed on 5/16/06.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6, 9, 13-16, 18-31, 40, 43, 44-52, 75- 84, 91-121 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Foursa [USPAT 6,717,963].

In re claims 1-6, 9, 13-16, 18-31, 40, 43, 44-52, 75- 84, 91-121, Foursa discloses a fiber comprising:

An optical fiber [see fig. 5] having a first section [any fiber portion having a grating 1] and second section [any fiber portion having a grating 2] coupled, the first

section having a gain medium including a first active material [column 4, lines 36-52, it could be a silica or phosphosilicate as taught in lines 46-51] and the second section having a gain medium including a second active material;

A first reflector disposed in the first section of the optical fiber, the first reflector being configured to reflect substantially all energy [column 4, lines 36-54]; and

A second reflector disposed in the second section of the optical fiber, the second reflector being configured to reflect substantially all energy.

In re claims 2, 3, 49, and 50, Foursa clearly shows in column 4, lines 36-54 that the first material could be different from the second material, and could be same as the second material.

Note that the claimed method of forming the device, such as "splicing", is not germane to the issue of patentability of the device itself. Therefore this limitation has not given any patentable weight.

In re claims 13-15, it is clear that any number of grating can be added in the optical device, and the first grating from the left of the device in fig. 5 can be the third reflector.

In re claims 16 and 40, if the first reflector is the first grating from the left in fig. 5, and if the second reflector is the third grating from the left in fig. 5, the third grating from the left is considered as the claimed third reflector.

In re claims 18-31, it is clear the fourth reflector and the fifth reflector are present in the fiber shown in fig. 5, and the wavelength can be determined as desired as taught in column 4, lines 36-54.

In re claims 45, 52, 92, 95, and 107, fig. 4 shows a fiber amplifier.

In re claims 83 and 84, it is clear that Foursa inherently shows all the claimed relationship between the wavelengths because Foursa's device produces Raman laser output.

In re claims 96, 99, 100, and 103, Foursa shows all the claimed structural limitations, therefore, it is clear that the claimed characteristic of the device is inherently shown by Foursa's device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8, 10, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foursa in view of Paek et al [USPAT 6,845,202].

Foursa disclose every aspect of claimed invention except for the claimed material.

Paek et al teach a general teaching at column 6, lines 28-32 that the claimed material is utilized to increase the refractive index of the material.

Therefore, It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Foursa's device to include the claimed material, because utilizing the claimed material for producing the active material in an optical waveguide is well known in the art so that the manufacturing process is easily accessible by the known fact.

Allowable Subject Matter

Claims 53-74 are allowed.

Claims 17, 32-39, 41, 85-89, and 90 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or suggest a fiber comprising all the specific components with the specific combination including the third reflector being configured to partially reflect energy impinging thereon at a second wavelength different than the

first wavelength as set forth in claims 17, 53-74, 85-90; and including a suppressor being capable of substantially suppressing the propagation of energy within the optical fiber at a wavelength corresponding to a higher order Raman shift wavelength than the first wavelength as set forth in claims 32-39, 41-42.

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Application/Control Number: 10/714,524
Art Unit: 2874

Page 7

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349. The examiner can normally be reached on Monday through Thursday.

Ellen E. Kim
Primary Examiner
July 23, 2006/EK

A handwritten signature in black ink, appearing to read 'E. Kim', with a stylized flourish at the end.